



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|------------------------|------------------|
| 10/784,931 | 02/25/2004 | Masanobu Torii | 1506.1040 | 9585 |
| 21171 | 7590 | 10/16/2006 | EXAMINER | |
| STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005 | | | AHMED, MOHAMED MAHMOUD | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3736 | |

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/784,931 | Applicant(s) TORII ET AL. | |
| | Examiner Mohamed Ahmed | Art Unit 3736 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>2.6/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: in page 38 the word "judgment" has been misspelled (page 11 lines 21 and 26, page 40, lines 2, 7 and 16).

Appropriate correction is required.

Claim Objections

The examiner suggests that the applicant amends claim 7 line 1 to state, "diagnostic support program on a computer readable medium for . . .".

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 – 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "concrete values" in claim 1 line 12, is a relative term, which renders the claim indefinite. The term "concrete values" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the

Art Unit: 3736

invention. Examiner has interpreted the claim in a manner that would render the prior art applicable. Correction is required.

The term "influence degree" in claim 1 line 14 is a relative term, which renders the claim indefinite. The term "influence degree" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Examiner has interpreted the claim in a manner that would render the prior art applicable. The inventor needs to better define the use of this term.

The term "substantially" in claim 4 line 1 is a relative term, which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Use of this word renders the claim indefinite.

The term "special form" in claim 4 line 5 is a relative term, which renders the claim indefinite. The term "special form" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Terms render claim indefinite, clear explanation of these terms is needed.

The term "similar" in claim 5 line 10 is a relative term, which render the claim indefinite. The term "similar" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the

Art Unit: 3736

art would not be reasonably apprised of the scope of the invention. A clear explanation of the use of these terms is needed.

The term "maximum degree of similarity" in claim 1 line 4 and claim 5 line 14 is a relative term, which render the claim indefinite. The term "maximum degree of similarity" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. A clear explanation of the use of these terms is needed.

Any claim dependent from a rejected claim is rejected due to its dependency upon said rejected claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 5 and 7 are rejected under 35 U.S.C. 102(b) as being unpatentable by Potter et al. USPN 4,733,354 (hereinafter Potter)

Potter discloses the following claim limitations:

1. A diagnostic support system, comprising:

a storage device (col. 2 ln. 23-24) stored with a case database (col. 2 ln. 23-24) accumulated with multiple pieces of case data including values in a predetermined plural number of fields with respect to symptoms of past patients;

and a computer (col. 1 ln 43, fig. 1) including an interface (col. 3 ln. 51-52), connected to said storage device via a signal line, for accessing said storage device, a processing device (col. 3 ln. 51 microprocessor), an input device ((fig. 1-14) col. 2 ln. 26-27 keyboard) and a display device ((fig. 1-16) col. 3 ln. 41-43 "CRT"),

wherein said processing device (col. 3 ln. 51 microprocessor), of said computer (col. 1 ln 43, fig. 1): calculates, for every concrete values in respective fields in the case data accumulated in the case database, an influence degree of the value contributing to determine a disease name (col. 2 ln.6-9);

when new patient data including values in some or all of the predetermined fields with respect to a symptom of a new patient are inputted via said input device ((fig. 1-14) col. 2 ln. 26-27 keyboard), calculates a degree of similarity of each piece of case data to the new patient data on the basis of values obtained for respective fields by weighting a difference between a value in each field of the case data and a value in its corresponding field of the new patient data with influence degree of that value in the new patient data; (col. 2 ln. 34-46) and

calculates, for every disease name, a degree of similarity of the disease name on the basis of degrees of similarity in all the case data having this disease name (col. 2 ln. 34-46);

Art Unit: 3736

and displays on said display device ((fig.1-16) col. 3 ln. 41-43 CRT) a disease name exhibiting a maximum degree of similarity together with the value in the field in the new patient data of which influence degree is maximum among those used for calculating the degree of similarity.

2. A diagnostic support system according to claim 1, wherein said processing device (col. 3 ln. 51 microprocessor) of said computer (col. 1 ln 43, fig. 1) displays on said display device a predetermined number of disease names in sequence from the disease name exhibiting the maximum degree of similarity together with their degrees of credibility calculated based on their degrees of similarity.

3. A diagnostic support system according to claim 1, wherein said processing device (col. 3 ln. 51 microprocessor) of said computer (col. 1 ln 43, fig. 1) displays on said display device ((fig 1-16) col. 3 ln. 41-43 CRT) values in a predetermined number of fields in the new patient data in sequence from the value exhibiting the maximum influence degree together with their influence degrees. (col.3 ln. 67-68, col. 4 ln. 1-5)

4. A diagnostic support system according to claim 1, wherein said processing device (col. 3 ln. 51 microprocessor) of said computer (col. 1 ln 43, fig. 1), if a value substantially coincident with the value in the new patient data is contained in the case data containing the disease name to be displayed on said display device ((fig. 1-16) col.

3 ln. 41-43 CRT), displays the value in the field in the new patient data in a special form.
(col. 2 ln. 64-67)

5. A diagnostic support system according to claim 1, wherein said processing device (col. 3 ln. 51 microprocessor) of said computer (col. 1 ln 43, fig. 1) displays, when an instruction of displaying similar case data with respect to the disease name displayed on said display device ((fig. 1-16) col. 3 ln. 41-43 CRT) is inputted via said input device ((fig. 1-14) col. 2 ln. 26-27 keyboard), contents of predetermined number of pieces of case data in sequence from the content exhibiting the maximum degree of similarity calculated on said display device ((fig. 1-16) col. 3 ln. 41-43 CRT).

7. A diagnostic support program for a computer comprising an interface (col. 3 ln. 51-52) for accessing a storage device (col. 2 ln. 23-24) stored with a case database (col.2 lines 6-9), accumulated with multiple pieces of case data including values in a predetermined plural number of fields with respect to symptoms of past patients, an input device ((fig. 1-14) col. 2 ln. 26-27 keyboard) and a display device ((fig. 1-16) col. 3 ln. 41-43 CRT), said program making said computer execute: calculate, for every concrete value in respective fields in the case data accumulated in the case database (col.2 lines 6-9), an influence degree of the value contributing to determine a disease name; when new patient data including values in some or all of the predetermined fields with respect to a symptom of a new patient are inputted via said input device ((fig. 1-14) col. 2 ln. 26-27 keyboard), calculate a degree of similarity of each piece of case data to

Art Unit: 3736

the new patient data on the basis of values obtained for respective fields by weighting a difference between a value in each field of the case data and a value in its corresponding field of new patient data with influence degree of that value in the new patient data; calculate, for every disease name, a degree of similarity of the disease name on the basis of degrees of similarity in all the case data having this disease name; and display on said display device ((fig. 1-16) col. 3 ln. 41-43 CRT) a disease name exhibiting a maximum degree of similarity together with the value in the field in the new patient data of which influence degree is maximum among those used for calculating the degree of similarity (col.2 ln.22-46).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Potter), and further in view of Iliff USPN 5,935,060 (hereinafter Iliff).

Potter discloses a method and apparatus for automated medical diagnosis including static algorithms, but fails to disclose a computer network. However, Iliff, a reference in the analogous art of computerized medical diagnostics, wherein said storage device is connected via a computer network linked to an interface of said

Art Unit: 3736

computer to other computer (Iloff col.2 ln. 1-13). It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the medical diagnosis apparatus computer disclosed in Potter, to include the network interface disclosed in Iliff, since allowing a network of computers to share the same information is more quick and efficient and allows more users to access the information. (Iloff col. 1 Ln. 25-63)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohamed Ahmed whose telephone number is 571-272-1537. The examiner can normally be reached on Monday - Friday 9 am – 5 pm.

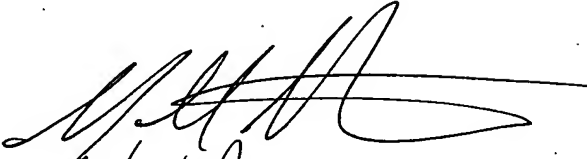
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on 571-272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3736

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MA

9-25-2006



Michael Astorino